CLAIMS

1. A method of maximising the fault coverage on an integrated digital circuit by re-ordering a number of test vectors for testing the digital circuit, said method comprising :

a) providing an initial set of test vectors T_0;

b) providing an original set of faults F_0;

c) selecting faults at random from the original fault list to form a sample fault list F_N;

d) forming a vector set T_{N-1} and simulating the vector set T_{N-1} against fault list F_N;

e) discarding any vector from the vector set T_{N-1} which does not detect any faults, and

f) saving the remaining vectors as vector set T_N, repeating the above steps a) to e) N times with N having a value of 1 to M so that the end of N steps saving test vectors T_0 to T_M;

g) removing duplicate vector patterns in each vector set T_N, and

h) initialising the final vector set and appending vector sets V_M to V_0 to produce a final vector set T_F.

2. A method as claimed in claim 1 wherein in steps a) to f) M is 10 and these steps are therefore repeated ten times.

3. A method as claimed in claim 1 wherein the list of faults selected from the original list of faults have a probability of X^{-N} to produce subset fault list F_N.

4. A method as claimed in claim 2 wherein the list of

faults selected from the original list of faults have a probability of X^{-N} to produce subset fault list F_N.

5. A method as claimed in claim 3 wherein X=2.

6. A method as claimed in claim 1 wherein the step of removing duplicate vector patterns is achieved by :

i) copying the original fault list F_o to provide a secondary fault list G_o;

j) fault simulating vector set T_N against G_N and deleting any vectors which find no faults;

k) saving the resulting vectors as vector set V_N and saving the list of undetected faults as list G_{N-1};

l) repeating step g) to i) M+1 times with N having values M to 0;

7. A method as claimed in claim 1 wherein the step of removing duplicate vector patterns is achieved by conducting a text search through the list of files of vector patterns looking for identical patterns, identifying the identical patterns and deleting the identical patterns identified.